US006298622B1

(12) **United States Patent**
Cretti

(10) **Patent No.: US 6,298,622 B1**
(45) **Date of Patent: Oct. 9, 2001**

(54) **SELF-SUPPORTING CONSTRUCTION ELEMENT OF EXPANDED PLASTICS, IN PARTICULAR FOR MANUFACTURING FLOOR ELEMENTS AND WALLS OF BUILDINGS IN GENERAL**

(75) Inventor: **Piero Cretti**, Ticino (CH)

(73) Assignee: **Plastedil, S.A.**, Chiasso (CH)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/425,165**

(22) Filed: **Oct. 22, 1999**

Related U.S. Application Data

(63) Continuation of application No. 09/284,550, filed on Apr. 15, 1999, now abandoned.

(30) **Foreign Application Priority Data**

Oct. 15, 1996 (IT) MI96A2137

(51) Int. Cl.[7] E04C 1/40

(52) U.S. Cl. 52/309.7; 52/309.12; 52/309.16; 52/309.17; 52/600; 52/612; 52/745.19

(58) Field of Search ..... 52/309.7, 309.8, 52/309.11, 309.12, 309.16, 309.17, 351, 352, 433, 444, 454, 600, 612, 745.19, DIG. 7, 783.1, 309.9, 309.14, 447, 448

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,324,916	*	7/1943	Duncan et al.	52/600 X
2,902,854	*	9/1959	Greene	52/600 X
3,313,073	*	4/1967	Mathews	52/309.11 X
3,484,331	*	12/1969	Betz	52/309.7 X
4,125,981	*	11/1978	Macleod et al.	52/309.12
4,128,975		12/1978	Abate .	
4,206,267	*	6/1980	Jungbluth	52/309.8 X
5,245,809	*	9/1993	Harrington	52/309.11
5,638,651	*	6/1997	Ford	52/309.7
5,729,936	*	3/1998	Maxwell	52/612 X

FOREIGN PATENT DOCUMENTS

0 459 924	12/1991	(EP) .
2 570 739	3/1986	(FR) .
1 130 727	10/1968	(GB) .
WO95/09953	4/1995	(WO) .

* cited by examiner

Primary Examiner—Carl D. Friedman
Assistant Examiner—Kevin D. Wilkens
(74) *Attorney, Agent, or Firm*—Sughrue, Mion, Zinn, Macpeak & Seas, PLLC

(57) **ABSTRACT**

A self-supporting construction element (1, 101) of expanded plastics, in particular for manufacturing floor elements and walls of buildings in general comprises: (1) a central body (2), substantially parallelepipedic in shape and having two opposite faces (6, 7); at least one reinforcing section bar (8,9) transversally extending across the central body (2) between the faces (6,7) thereof and embedded in the expanded plastics; a lath (16) for supporting at least one layer (17) of a suitable covering material, associated to a fin (11,12) of the reinforcing section bar (8,9) lying flush with and substantially parallel to at least one of the faces (6,7) of the construction element (1,101).

65 Claims, 7 Drawing Sheets